ONTARIO DEPARTMENT OF AGRICULTURE.

TORONTO, FEBRUARY, 1899.

BULLETIN—(SPECIAL).

FRUIT PULP.

THE EXPORT OF FRUIT PULP TO GREAT BRITAIN.

During the past year correspondence was carried on between the Ontario Department of Agriculture, Toronto, and Mr. Harrison Watson, Curator of the Canadian Section of the Imperial Institute, London, England, as to the possibility of shipping fruit pulp from Ontario to Great Britain. The fruit pulp imported into the latter country is used for making jam. At the request of the Secretary of the Ontario Fruit Growers' Association, the Deputy Minister of Agriculture presented the most important part of this correspondence to the annual meeting of the Association held at St. Catharines in December, 1898. A committee was appointed to investigate the question, and promise was made to have the correspondence printed and placed in the hands of the members at an early day. The main part of Mr. Watson's correspondence is given herewith, with the hope that fruit-growers in Ontario will find therein information desired in regard to fruit-pulp, its preparation, and the condition of British trade.

RASPBERRY PULP.

LONDON, England, July 15th, 1898.

I have received the following letter from Anderson & Coltman, 5 Philpot Lane, London, E.C., and Liverpool, in reference to raspberry pulp.

"This is an article in very large consumption here, and this is a particular season in which we think your friends (if large quantities are grown in Canada)

would do well to make a trial shipment. We have had considerable quantities from Australia. Some three years ago we had several hundred tons, but since then, owing to dry weather, their crops have not been large enough to enable them to ship. The form that this is put up in Australia is either in cases, each 2 x 45 lb. square tins, or 10 x 11 lb. square tins gross weight. The Australians have generally packed in the square tin, as it makes a little difference in the freight, in consequence of round tins taking up more room; but the bulk of the pulp which we received from the continent, which is mainly apricot, is generally shipped in the round tins, and these we think are more suitable for carrying, as the square tin is very apt to crack at the edges and corners, which creates leakage. We cannot tell you how long the raspberry is cooked in the processing, but no additional water must be used, the fruit only being put into the tin, and we think only sufficiently cooked to complete the necessary vacuum. The great object with this article is good colour and firmness of fruit, and, of course, you will understand that no sugar must be added, but only the fruit itself packed. We should estimate the value to-day would be roughly about £30 per ton gross in tin, ex-wharf London. As it is now getting late in the year there is not much chance of any of your friends packing any this season, as they would probably not have the tins ready for use, but if any of them would like to pack a small quantity, say a few cases, and send them forward simply as a trial, we would very soon advise them as to whether the article was of the right nature, and then matters would be ready for another season. In a year like the present, when rather a short crop is expected here, and that following an exceptionally short crop here last year, we could probably very easily dispose of four or five hundred tons. Last year the crop was so light that in January and February last if we had had any pulp here we might have made £50 to £60 per ton for it."

Grape and Blueberry Pulp.

The following communications regarding the above named fruit pulps were also received through Mr. Watson, from various jam manufacturers of England:

T. W. Beach & Sons, Ealing Road, Brentford, Middlesex: "We do not consider that the fruits you mention would be very suitable for jam, and a good demand would not be created. We enclose offers showing the kinds that would be profitably grown in Canada as demand and prices are invariably good. We would not object to testing the kinds you mention."

Jas. Keiller & Sons, Dundee, and 27 Mincing Lane, London, E.C.: "We do not think that grape pulp is of any use to us, but should like to see the blueberry pulp, and if you would send us samples we would be able to let you know if it is suitable for our purposes."

Crosse & Blackwell, Soho Square, London, W.C.: "We do not think there would be any demand here for grape or blueberry pulp. Mr. Grant, of Maidstone, endeavoured to utilise grape pulp, and we are informed he made a very heavy loss."

C. E. Morton. 107, 809 Leadenhall, E.C.: "We regret that neither the grape nor the blueberry pulp you mention will be of any interest to us in the

export trade, nor do we think there will be any trade for them in the English market, fruit being so cheap."

John Moir & Son, London, E.C.: "In reply we have to say that there is no demand for this class of jams, and to create a demand they would have to be offered to the public at very low prices, and at the same time considerable outlay would be necessary in advertising them, and this being the position at present it is probable that the cost of pulping, freight and other charges would be greater than the price that would be obtained for the jam in this country. There is no blueberry (Scottish Blaeberry) in existence made from the fruit that grows wild in the woods and on the hillsides of Scotland, so far as we know, and we do not anticipate any large sale from an article made from the pulp that might be shipped from Ontario. We are sorry we cannot put forward a more encouraging view for the produce, but we are giving you our own opinion at the moment from our experience of the jam trade."

Samuel Whittaker & Sons, Manchester: "We beg to say that we do not think there is any opening at all for either grape or blueberry pulp in this country for jam making purposes."

LONDON, October 21, 1898.

Concerning the raspberry pulp, Messrs. Anderson & Coltman heard from some half dozen Canadian firms, Mr. G. R. Lewis, of Collingwood, being however the only Ontario exporter. It may interest you to learn that a few tins sent over from Woodstock, N.B., realized a price equal to 42s. per cwt. It is a pity that their enquiry was not made earlier, for this season there is a heavy demand for raspberry pulp and high prices are being realized. The demand for this pulp is largely dependent in the results of home crops, and with a large yield prices would hardly be profitable to Canadian shippers. However, as regards next season, the prices may still be fairly good, as there have now been two bad crops, and the demand will likely be a considerable one.

D. Frey & Co., Hamburg, Germany, who have already purchased evaporated apples, are also interested in fruit pulps, and are ready to receive samples and prices c.i.f. from Canada. In Germany the principal demand is also apricot. Messrs. Frey gave the following information: "If a large business is to be done with Germany in fruit pulps, Canadian exporters must ship the stuff in barrels and not in hermetically closed tins as the latter have to pay the maximum duty, viz: Marks 60 per 100 kilos whilst the former only pay M. 4."

(The mark is about 24 cents, and the kilo weighs 2 2 lbs.)

I should personally doubt whether Germany would buy much fruit pulp except in years when local crops were phenomenally bad. The Rhine provinces, and other sections I know from personal observation, are large producers of fruit and export to the United Kingdom.

PREPARING AND PACKING PULP.

LONDON, October 28th, 1898.

In reference to the fruit pulp matter I have been fortunate enough, thanks to the courtesy of one of the largest jam manufacturers, to have had the opportunity of personally visiting their factory and inspecting the methods by which

fruit pulp is prepared. In the first place I might mention that the exigencies of the trade necessitate a certain amount of pulping in all large factories where jam is being continually made according to the existing demand, it being found preferable to preserve the fruit in the form of pulp to converting it at once into jam. The fresh fruit is, without the addition of any sugar, placed in the copper pans, only sufficient water being added to prevent the mixture from becoming dry. The contents are heated for ten minutes or more, until boiling is reached and some evaporation occurs. In the meantime jars or barrels are prepared by inserting small pieces of rope covered with a solution of rock sulphur which are burned in the packages until the interior is thoroughly impregnated and the flame extinguished. The number of ropes varies from one in the case of a jar to several in that of a hogshead, and in the latter instance, where the package is only gradually filled and aperture remains open some time, the burning process is repeated as occasion may require until the bung is closed. The boiling fruit is poured into the prepared receptacles, and these are carefully closed so as to be air tight. The packages are then allowed to cool and subsequently are removed to the storehouse. Here, beyond extremes of heat and cold being avoided, no special precautions as to the temperature seem to be taken. Occasionally a package explodes, due to the generation of gas, but the loss is trifling. I am informed that the pulp can be kept for two years or even longer without deterioration.

When needed the package is opened, and it is found that a solid mass, a kind of fungus, lies on the top of the fruit. This is carefully removed, and the sulphur fungus, instead of injuring the fruit, acts as a preservative, and the pulp is then again poured into the copper pans and converted into jam in the usual way.

Regarding foreign pulp, which in the case of apricot and raspberry is packed in cylindrical or square *tins*, I cannot obtain exact details, but am told that the tins when filled are steamed, the process being somewhat similar to that adopted in the case of tinned vegetables, fruit, etc. This is not done to any extent in the United Kingdom but you could presumably obtain information from the United States, where pulp is prepared for lengthy transportation.

British Importation of Pulp.

London, November 3rd, 1898

Regarding the importation of fruit pulp, I have had the advantage of a long talk with Mr. W. H. Idrins, of the firm of John Idrins & Sons, Evesham, Worcestershire. This firm, situated in the centre of the fruit growing district, are probably the largest dealers in fruit and pulps in the kingdom, and have transactions with all the jam manufacturers Mr. W. H. is the pulp expert, and has already visited Australia, from which they import largely. He is inclined to be greatly interested in possible supplies from Canada, and would not only give full information and buy if samples and prices were satisfactory, but should there appear to be possibilities of a considerable trade, would visit Canada next summer. The firm are not brokers, but dealers, and purchase outright. Mr. Idrins

considers that there is always importation of apricot, of raspberry about two years out of three, and generally of black currant, greengage and whole fruit strawberry.

Raspberries.—The importation of pulp has only taken place during the past few years. Until recently it came almost wholly from Tasmania. Within the past two years Victoria has commenced to send over a little, followed by France; and this year, owing to exceptional circumstances, fresh fruit has come in both from Holland and Denmark.

The chief Tasmania shipper is Mr. W. D. Peacock, of Hobart. Originally the pulp came over in 45 pound tins, packed tightly two in a case. Twenty-eight pound tins, however, find greater favor, and the French method—five kilos (10 pound) tins, 10 tins to the case, the tins being lacquered inside which preserves the color of the raspberries—has met with much favor. A considerable proportion comes over from Tasmania in quarter casks (28 gallons) for the large manufacturers, which makes a difference of from £3 to £4 per ton as compared with the pulp packed in tins. In some seasons as much as 150 tons have been imported from Tasmania. There the fruit is picked about the first week in January, and the pulp reaches the United Kingdom at the beginning of April. Australia has therefore the advantage of knowing the result of the British crop, and subsequently the probable demand and prices. Another advantage is that the pulp arrives just when the largest demand for the jam sets in. A very exceptional condition of affairs exists at present, owing to two successive failures of the British raspberry crop coinciding with two short crops in Australia, owing to bush fires and drouth. At the moment as much as £50 a ton is quoted, but there are no supplies. A glance at the past few years offers, however, a better idea of values. In 1884 Tasmania pulp averaged about £26 c.i.f. London; in 1895 about £24; in 1896 none was wanted and a small lot purchased at £21 had to be sacrificed at about £18; in 1897 there was hardly any supply and £36 to £40 was obtained. This season there has been even less supply, and £40 and more have been bid. Speaking generally, can Canadian producers do the trade at an average return of from £23 to £25 per ton (2240) c.i.f.? It has, of course, still to be shown that their fruit compares favorably with existing varieties in demand, which, however, seems probable. The variety known as "Semper Fidelis" is in much favor. It is possible that the Canadian wild raspberry which is, I know, prized in Canada for jam purposes, might be suitable. It must be borne in mind that a loss of some 10 to 15 per cent. of the weight of fresh fruit is incurred in the process of pulping. Concerning pulping, the raspberries packed in tins as well as the strawberries are boiled before being placed in the tins. Apricots, plums and greengages are often boiled in the tins. Owing to the length of the journey from Australia, the sulphuring methods used here for domestic purposes when the pulp has been packed in barrels has been found insufficient, and what is known as Peacock's process substituted. Instead of the packages being impregnated as already described, the fumes of sulphur are passed through the pulp after it has been placed in the barrels, the fumes coming in tubes from a retort. When the pulp is again boiled for jam making, the sulphur being volatile, disappears. Mr. Idrins says that there would be no diffi-

culty in adopting this process. The freight from Tasmania is equivalent to about £3 per ton weight. When raspberries cost more than £28 per ton it does not pay jam makers to buy them. The prices of jams are standard, and the moment the cost of pulp exceeds the limit as little jam as possible is made.

Black Currants.—There is always a demand for the whole fruit; some pulp coming from Australia has realized as much as £40 per ton, c.i.f., but the average value is about £25. This pulp must be packed in tins for it will not stand the sulphur process.

Greengages.—There is not much of this fruit grown in England, and not very much jam made. A fair amount both of fresh fruit and pulp comes from France and Belgium, and the average value is from £14 to £16, c.i.f.

Plums, Gooseberries, and Blackberries.—There is no opening, and prices for the fresh fruit are invariably too low to admit of importing.

Apricot.—There is an immense quantity imported from France, Italy, and Portugal. Some from California and Australia have recently commenced what is likely to become an extensive trade. The competition is usually severe, although at the moment, for special causes, prices are very high. The apricots are halved and the stones removed. The 5 kilo tin is in favor. Canada, as far as I know, produces few apricots.

Strawberries.—There is a certain demand for whole fruit strawberries which must not be passed through the pulping machine. They are packed in tins and jars, and the average value is about £22 per ton. Paxton's and American Scarlet would be suitable. It may be mentioned that the demand is for whole fruit jam.

Grapes.—There is no demand for grapes.

Blueberries.—A demand might possibly be worked up for blueberries, but at present the jam is unknown. Some peach pulp is brought in but the demand is small.

LONDON, November 16, 1898.

I think I have already emphasized the extensive nature of the apricot imports which, I believe, largely exceed 1,000 tons a year, the whole supply practically coming from abroad. The average value is somewhere about £15 per ton, c.i.f., London, but at the moment there is a dearth of supplies, and I am told that from £30 to £40 have been quoted. Referring again to raspberry pulp, you will have noted that the domestic sulphur process would not be suitable for a long journey, and that in the case of pulp packed in barrels the special Peacock process would have to be adopted. I might also mention that I went down to the factory of other jam makers, Chas. Wix & Sons, Southwark, and saw them open two lots of raspberry pulp which they had purchased through brokers, and which came from Canada. The one packed in gallon tin was quite satisfactory; the other in 12 lb. tin contained about one-third of liquid, showing that water had been added, and was thoroughly unsatisfactory. Mr. Wix says that a few shipments of that nature would speedily damage the prospects of Canadian exporters.

LONDON, November 17, 1898.

Concerning raspberry pulp, I hear this morning that a cable from Victoria states that shippers cannot accept less than £45 per ton, c.i.f., London, for the coming crop, and that this price is prohibitive. Whether the next Australian crop promises to be a short one, or the price is an arbitrary one, I cannot say at the moment; but the price seems to point to fairly high values for next year, and Canadian producers would do well to keep posted as to the course of events.

(The following is a copy of the letter from the Commercial Department of the Board of Trade in response to Mr. Harrison Watson's request for statistics in reference to the importation of fruit pulp into England.)

November 16, 1898.

"I am directed by the Board of Trade to acknowledge the receipt of your letter of the 11th instant, with enquiries as to the statistics of the importation into this country of fruit pulp. In reply, I am to say that under the heading, 'Fruit Preserved without Sugar other than Dried,' in the Annual Statement of the Trade of the United Kingdom are included:

1. Fruit pulp, chiefly apricot pulp.
2. Fruits in their own juice, as pine apples, etc.
3. Fruit in salt, as olives.

No separate particulars of the imports of the articles included under the general heading are available from the Customs records, and the Board consequently regret that they are unable to supply you with the information you require as to the imports of fruit pulp, or as to the proportion which such imports represent of the total imports under the heading in the Annual Statement which you quote."

Fruit pulp has been prepared in Australia on a pretty considerable scale for exportation. The *Australasian* of June 25th reports that six tons of raspberry pulp, shipped from Melbourne last season, were sold for £36 10s. per ton in London. The fruit was boiled and filled hot into 40 lb. tins, and two tins put into a case with a loose board between them. Another report states that a consignment of 20 tons of apricot pulp had arrived in London in good condition. This method of exporting fruit is likely to become an important and safe way of disposing of surplus fruit, and it is easy to see that the article would be likely to secure a good demand at fair prices.

MARKET PRICES FOR PULP.

The following is taken from a circular sent out by Edwin Fischer & Co., 11 Rood Lane, Eastcheap, London, E.C., dated Sept. 11th, and enclosed in a letter received from Mr. Harrison Watson:

The demand for apricot pulp continues very fair in spite of the heavy advance. It is now a certainty that the production was very limited and the high prices therefore warranted. Moreover, manufacturers both here and abroad

are realizing that there is much liklihood of a further advance. A certain proportion of our sales this month was for a continental demand—even France to-day is an importer. The following quotations are given, a kilogram being equal to 2.2 pounds :

Apricot Pulp.

Italian, very solid, packed 10 x 5 ko. tins, at 33s.
Spanish, superior, unlabelled, " " 30s.
Spanish, Alzamora brand, " " 30s.
Californian, 12 x noml. gallon tins, 22s. 6d. and 25s.

Kindly note all our apricot pulp is in good weight tins and free from added water.

Greengage Pulp.

Fine French, packed 10 x 5 ko. tins, at 22s.

Black Currant Pulp.

Finest French, specially packed to our order, without strigs, very solid, no added water.

All wharf London, fourteen days net.